

Abstract

A method and a device are used for determining a characteristic value for the perfusion of modified, in particular pigmented tissue regions in organs of living beings, for example the skin. By means of a laser flowmeter, a first volumetric flow rate and a second volumetric flow rate of the blood are determined at a first measurement point and at a second measurement point, respectively within the modified tissue region and within the surrounding, unmodified tissue region, in each case as a measurement profile of a volumetric flow rate signal as a function of time. A wavelet analysis of each of the measurement profiles is then carried out as a three-dimensional representation of the signal intensity over a frequency or scaling axis and time. The profile of a vasomotion energy over the frequency or scaling axis is subsequently determined for each of the measurement profiles subjected to the wavelet analysis, the vasomotion energy being the integral of the signal intensity with respect to time for a particular frequency or scaling value. Next, the profile of the vasomotion energy of the second measurement profile is subtracted from the profile of the vasomotion energy of the first measurement profile, so as to form a difference profile. The difference profile is then integrated in order to obtain the characteristic value.